

## REMARKS

The Final Office Action of March 3, 2010 has been considered by the Applicants. Claims 1, 22, and 25 are amended. Claims 1-2 and 21-25 are pending. Reconsideration of the Application is requested.

The claims are amended to specify that the titania-metal composite is a mixture of two sets of particles, the titanium oxide particles and elemental or metal particles. Implicit support is present for the term "elemental particles". In particular, the use of copper, manganese, nickel, cobalt, iron, and zinc, and particularly their use in the Examples, makes clear that the particles do not contain other elements.

Claims 1-2 and 25 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ogata '463 (JP2002212463A). Applicants traverse the rejection.

In distinguishing over Ogata '463, Applicants wish to point out the operative mechanism of Ogata '463 is due to the increased conductivity of the film-forming liquid, rather than to its photocatalytic properties. As explained in Sections A-1 and A-8, beginning on pages 8 and 15 of the present specification, the specifically recited metals have a potential difference between the metal and the titanium, such that photooxidation due to radicals is reduced or prevented. This is a different mechanism of operation. As a result, only the specifically recited metals can be used.

Applicants request withdrawal of the 102(b) rejection over Ogata '463.

Claims 1-2 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ogata '969 (U.S. Patent No. 6,099,969).

Claim 21 was rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ogata '969.

Applicants traverse the rejections together.

The claims have been amended to specify that the metal particles are elemental, or for example that copper particles contain only particles. The Examiner cited Ogata '969 as disclosing a composite doped with ceramic materials. The ceramic materials described by Ogata '969 contain other elements, and are thus excluded from the amended claims. It does not appear that there is any motivation to add non-ceramic

materials to Ogata '969. Thus, the claims are not obvious over Ogata '969 either.

Applicants request withdrawal of the §§ 102(b)/103(a) rejections.

Claims 1 and 21-23 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over Elfenthal (U.S. Patent No. 5,451,252).

Claims 2 and 24-25 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Elfenthal in view of Ogata '463.

Applicants traverse the rejections together.

Elfenthal describes a pigment particle with intracrystalline dopants. This structure is significantly different from the mixture of fine particles now described in the amended claims, because the amended claims do not contain intracrystalline doping. Ogata '463 does not appear to remedy this deficiency. Thus, the amended claims are not anticipated or obvious.

Applicants request withdrawal of the §§ 102(b)/103(a) rejections.

Claims 1 and 21-23 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over DE2545243.

Claims 2 and 24-25 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over DE2545243 in view of Ogata '463.

Applicants traverse the rejections together.

It appears that DE2545243 teaches a calcining process such that the compound containing ions is precipitated onto the TiO<sub>2</sub>, such that the ions are present on the surface of the TiO<sub>2</sub> particles. This process thus operates by creating a "shell" around the TiO<sub>2</sub>, so that direct contact between the TiO<sub>2</sub> and any organic material is reduced, thus decreasing any photocatalytic activity. This structure is also different from the mixture of fine particles now described in the amended claims. Ogata '463 does not appear to remedy this deficiency. Thus, the amended claims are not anticipated or obvious.

Applicants request withdrawal of the § 103(a) rejections.

Claim 21 was rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ogata '463.

Claims 21-24 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ogata '463 in view of Elfenthal.

Claims 21-24 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ogata '463 in view of DE2545243.

Applicants traverse the rejections together.

As noted above, the operating mechanism of the present claims is different from that described by Ogata '463. This is thus a distinguishing point over the cited references. Applicants submit that Elfenthal and DE2545243 do not teach or suggest that the present operating mechanism would be used. In this respect, any type of titanium (anatase, amorphous, brookite, rutile) can thus be used with the composite recited in present claims.

Applicants request withdrawal of the § 103(a) rejections.

Applicants note that this RCE is being filed on Tuesday, July 6, 2010. The four-month date was Saturday, July 3, 2010, and the USPTO was closed on Monday, July 5, 2010, for the Independence Day holiday. Thus, it is believed that only a one-month extension of time is needed.

## CONCLUSION

For the above reasons, all pending claims (1-2 and 21-25) are in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Jay F. Moldovanyi, at telephone number 216-363-9000, Cleveland, OH.

It is believed that no fee, other than a one month extension of time, is due in conjunction with this response. If, however, it is determined that fees are due, authorization is hereby given for deduction of those fees, other than the issue fees, from Deposit Account No. 06-0308.

Respectfully submitted,

Fay Sharpe LLP

July 6, 2010

Date

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Express Mail Label No.:	Signature: <i>Kathleen A. Nimrichter</i>
Date: July 6, 2010	Name: Kathleen A. Nimrichter